



5/037/0121  
Energy Fuels Resources (USA) Inc.  
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Lakewood, CO, US, 80228  
303-974-2140  
www.energyfuels.com

*Mela*

December 22, 2015

Daren Rasmussen  
Utah Division of Water Rights  
P.O. Box 146300  
Salt Lake City, Utah 84114-6300

**RE: MODIFICATION to Stream Alteration Permit Application 15-99-01SA**

Dear Mr. Rasmussen:

On December 2, 2015, Energy Fuels Resources (USA) Inc. (Energy Fuels) received your comments on Stream Alteration Permit Application 15-99-01SA. In response to your comments and subsequent telephone communication, Energy Fuels prepared the attached Stream Alteration Permit Modification 1.

Please contact me at 303-389-4133 or [areither@energyfuels.com](mailto:areither@energyfuels.com) if you have any questions or need additional information.

Sincerely,

A handwritten signature in blue ink that reads 'Andrea Reither'.

Andrea Reither  
Senior Environmental Specialist

cc: Mike Bradley (DOGM), Ted McDougall (BLM)  
Scott Bakken, Trey White (Energy Fuels)

**RECEIVED**

**DEC 23 2015**

Div. of Oil, Gas & Mining

# Stream Alteration Permit Application Modification 1

## 1.0 INTRODUCTION

Subsequent to filing Stream Alteration Permit Application Number 15-99-01SA on November 2, 2015 by Energy Fuels, the Daneros Mine was impacted by a significant flash flood. The site sustained additional stormwater damage which will require repairs to be completed within Bullseye Canyon. Energy Fuels requests approval to complete the repairs as part of Stream Alteration Permit Number 15-99-01SA. Information pertaining to this modification request is included below along with responses to the Division of Water Rights' comments submitted on the November permit application.

## 2.0 CULVERT REPLACEMENT

Three 60-inch culverts were installed at the Daneros Mine in 2010 under Stream Alteration Permit Number 10-99-01SA. The culverts are located within Bullseye Canyon and carry flow from the watershed northeast of the mine under the county road where it continues to flow southwest in the canyon as shown on Map 2. During the most recent storm, all three culverts were damaged beyond repair and must be removed and replaced. See Photograph 1 below. The culverts were sized to pass a 100 year, 24 hour storm event and based on post-storm site conditions, it is estimated that the flash flood exceeded the design storm event. The existing 3 culverts are 60-inch HDPE. Photograph 2 shows the culverts downstream of the road. The road constructed in 2010 was 24-feet wide and more than half of that span was scoured away during the recent storms, exposing a significant length of the culverts on the downstream side.

Energy Fuels proposes to remove and stockpile the remaining road bed material, then remove the culverts and replace them with 8-foot corrugated steel culverts as shown on Map 4. We anticipate that these replacement culverts will be more durable and will be capable of passing larger storm events. Once the new culverts are placed, we propose to re-construct the road to an approximate width of 24-feet. The center culvert will be placed 6-inches lower than the other two to help maintain an active water course. The equipment used to replace the culverts will be the same as the equipment proposed for use in the November stream alteration permit application. The disturbance area associated with replacement of the culverts will be similar to what was disturbed during their original placement. That area was surveyed for cultural resources in 2008 and the report was provided to DWR as part of the application for Stream Alteration Permit Number 10-99-01SA. No sites were found that were considered potentially eligible for the National Register of Historic Places.

**Photograph 1 Culverts on the Upstream side of the Road (12/2015)**



**Photograph 2 Culverts on the Downstream side of the Road (12/2015)**



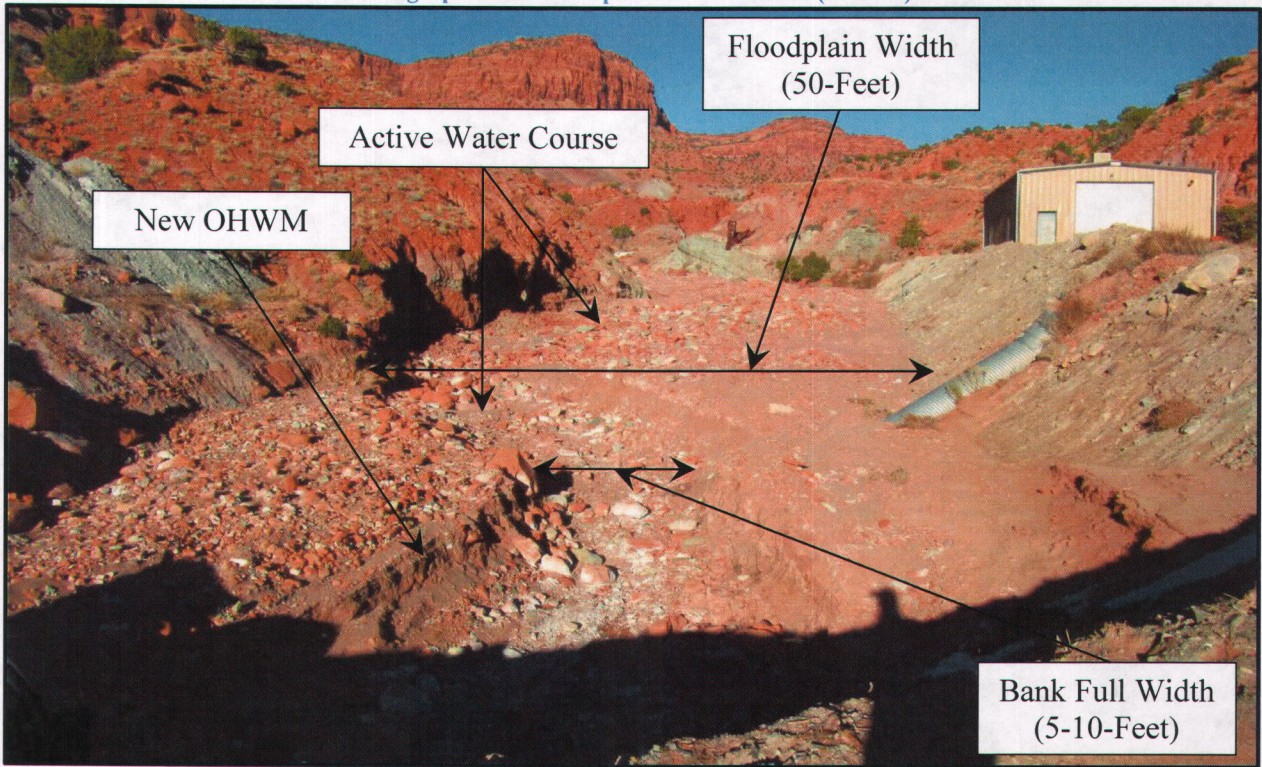
### 3.0 RESPONSE TO COMMENTS

During this year's abnormally large rain storms, the active water course had realigned from the northwest bank of Bullseye Canyon, to the southeast bank so that it was cutting into the fill material below the shop. The Stream Alteration Permit Application filed in November, requested authorization to move rocks deposited in the previous active water course and place them at the foot of the fill material supporting the mine shop. This would encourage the active water course to return to its original alignment on the far side of the floodplain, away from the fill material, and would armor and stabilize the fill material.

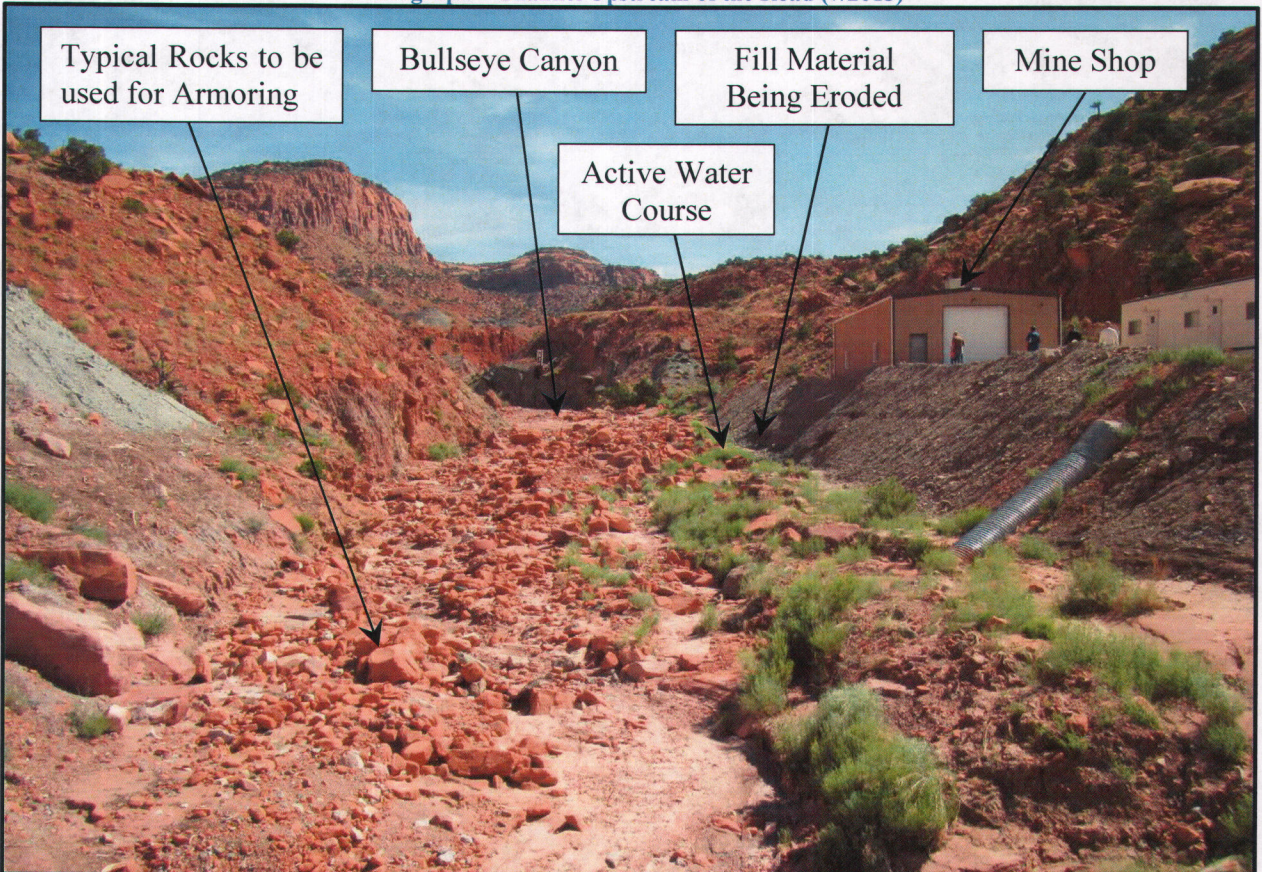
Above the Daneros Mine, Bullseye Canyon drains a large watershed but the area sees little regular rainfall. When storms do occur, stormwater tends to runoff quickly and carry large volumes of sediment and rock with it, creating damaging, flash-flood-like flow in the canyon. As a result of these conditions, the channel invert, which might also be considered the floodplain, supports very little vegetation. A braided active water course is apparent within the channel invert and adjusts its location during storm events based on deposition of new sediment and rock. The active water course has been used to define an Ordinary High Water Mark (OHWM) due to the difficulty of evaluating a proper OHWM at the site.

Photographs 3, 4 and 5 below were taken at the same vantage point in December 2015, July 2015 and June 2013 respectively. This series of photographs show the channel just upstream of the road prior to, in between, and after the series of large storms that passed through the area in the summer and fall of 2015. The photographs are marked to show the active water course and the estimated OHWM. The most recent storm adjusted the active water course closer to its previous alignment, as shown in Photographs 3 and 5. While that helped to prevent immediate damage to the fill material supporting the mine shop, the work proposed in the November application still needs to be completed to protect the shop from future damage.

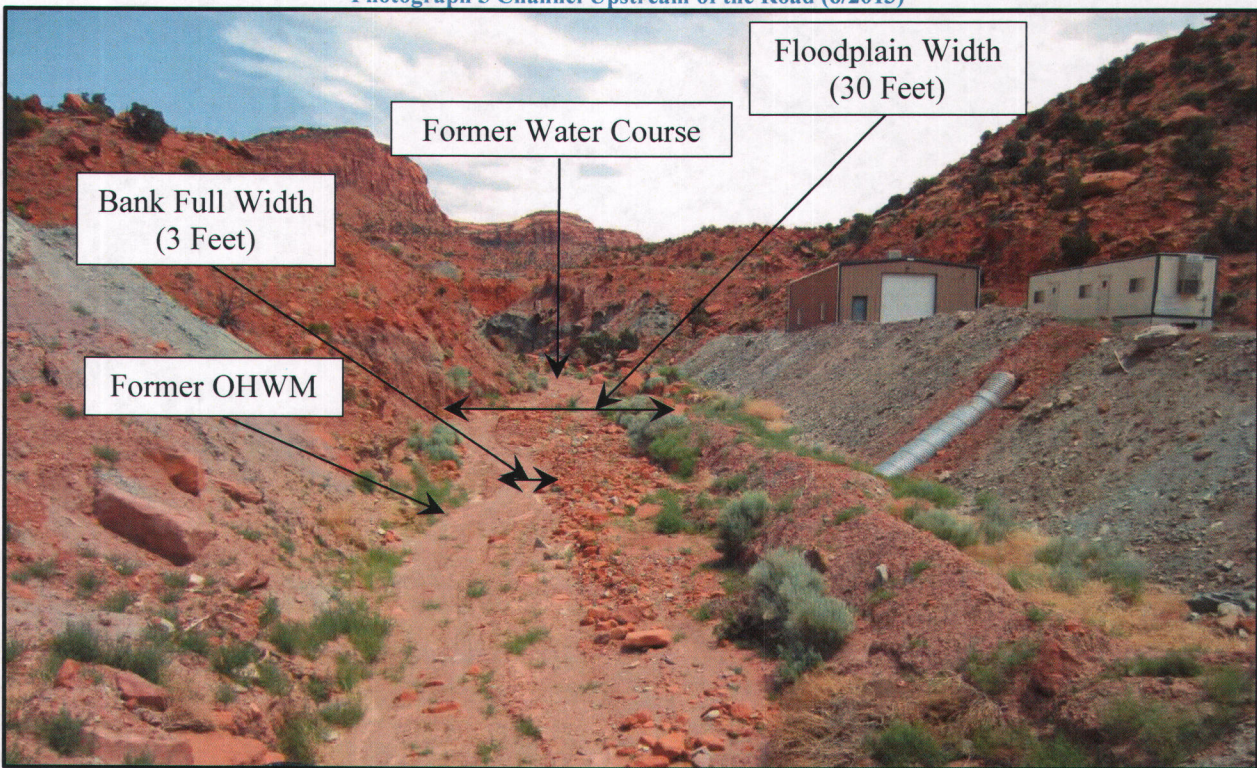
Photograph 3 Channel Upstream of the Road (12/2015)



Photograph 4 Channel Upstream of the Road (7/2015)



Photograph 5 Channel Upstream of the Road (6/2013)



On 12/2/2015, Energy Fuels received comments from the Utah Division of Water Rights (DWR) on our November application.

The comments are included below along with responses:

1. *A more detailed plan view showing stream and adjacent features (including infrastructure), approximate dimensions, and ordinary high water.*

Map 2 was revised to incorporate the requested information.

2. *A more detailed cross-section view showing the stream and adjacent features, approximate dimensions, and ordinary high water.*

Map 3 was revised to incorporate the requested information. Photographs 3 and 5 were annotated to include this information. Map 4 was provided to show the proposed culverts.

3. *The cumulative stream reach length impacted below bankfull / ordinary high water needs to be submitted (not necessarily the additive length of each bank).*

The cumulative stream reach length below bank full that may be impacted by the bank stabilization, channel cleanup and culvert replacement is approximately 345 feet.

4. *The Corps has indicated that the applicant needs to provide a plan view with the project area outlined (area where actual impacts will occur) on a scale that can clearly show the location of the Ordinary High Water Mark (OHWM) and impacted areas. On the plan view include: 1) OHWM, north arrow, scale; 2) Amount of permanently impacted area below OHWM (and temporary impact areas, if any); and 3) Fill amounts below OHWM (in this case, the amount of fill/rocks moved from one location to another if both are below OHWM). Also please provide a cross-section view of the impacted area on the stream bank, with the impacted area and OHWM depicted. For more information, Jon Boe, of the Corps, can be contacted at 435-986-1961 or at [Jon.R.Boe@usace.army.mil](mailto:Jon.R.Boe@usace.army.mil).*

Maps 2, 3 and 4 incorporate the requested information. Photograph 3 was also annotated to include this information. The impacts to the area below the OHWM include:

The center culvert will be placed 6-inches lower than the other two, such that the active water course passes through it, placing it below the OHWM. The reach length below bank full that will be impacted by this activity is approximately 70 feet.

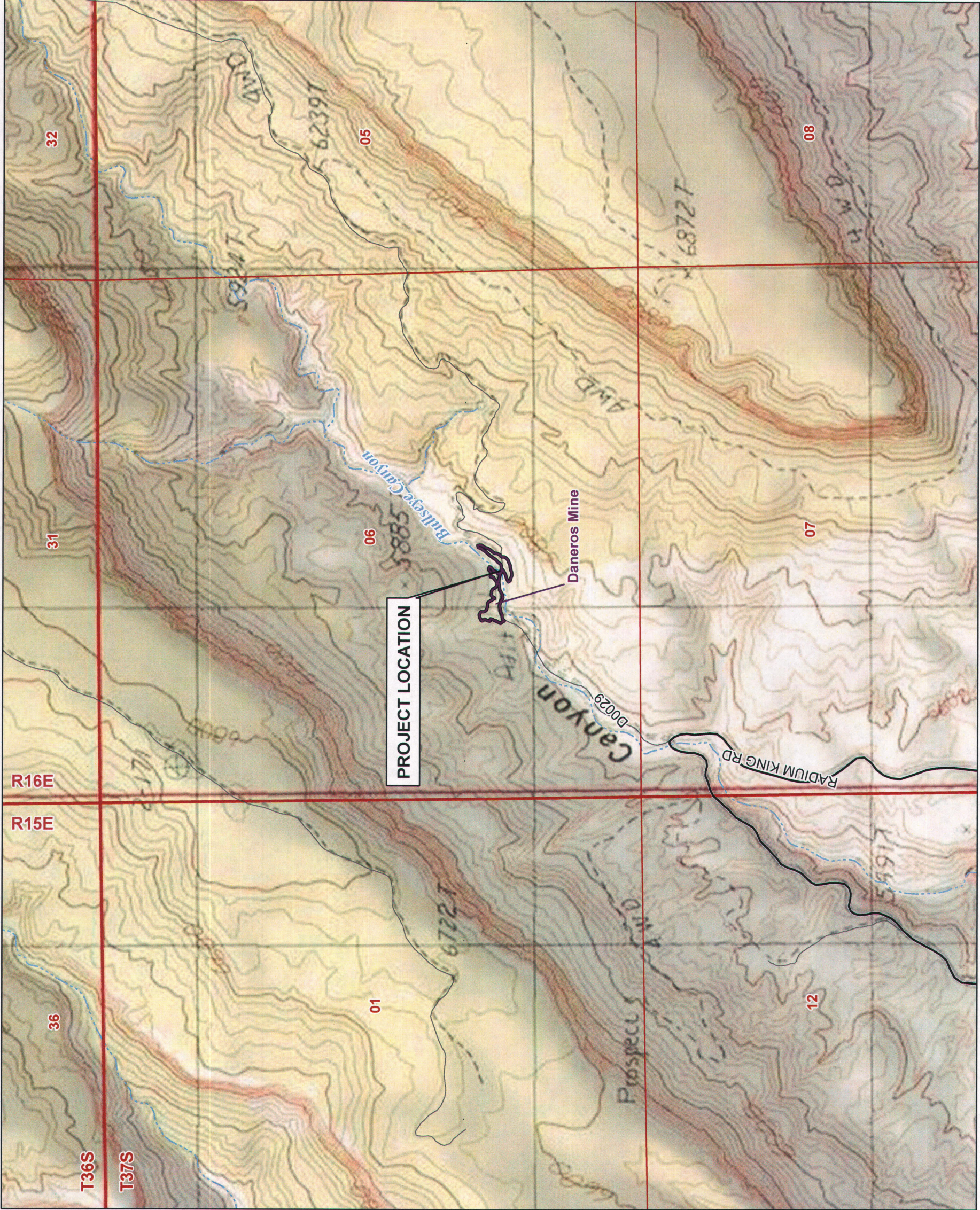
The active water course, or area below the OHWM, upstream of the culverts will be cleaned out of large material so that it can pass normal storm events. The removed material will be utilized to armor and support the fill material which is located on the western edge of the floodplain. No fill will be placed below the OHWM. The reach length below bank full that will be impacted by this activity is approximately 275 feet.

## 4.0 MAPS

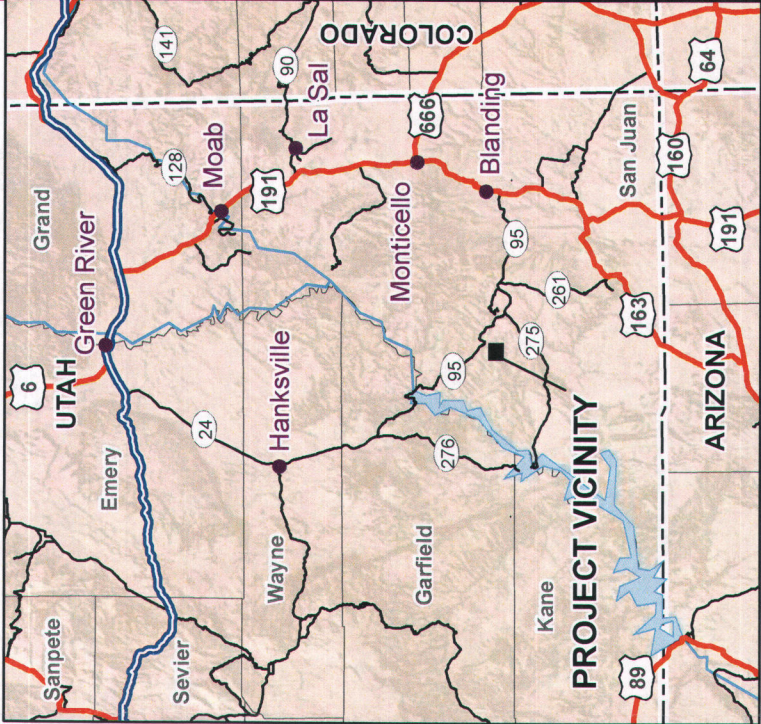
The following maps are included in Attachment A:

- Map 1 – Project Location Map prepared on a USGS 7.5' topographic quadrangle
- Map 2 REVISED – Proposed Activity Area prepared on an aerial photograph
- Map 3 REVISED – Cross Section A-A' showing the extent of bank stabilization work
- Map 4 – Cross Section B-B' showing the culvert installation

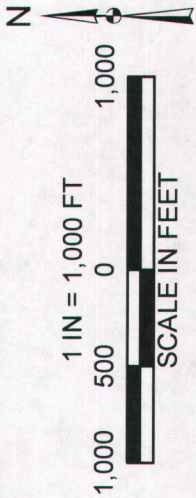
# **ATTACHMENT A**



- Legend**
- Existing Mine Area
  - Local Road
  - Rural Road
  - Township and Range
  - Section
  - Ephemeral Drainage



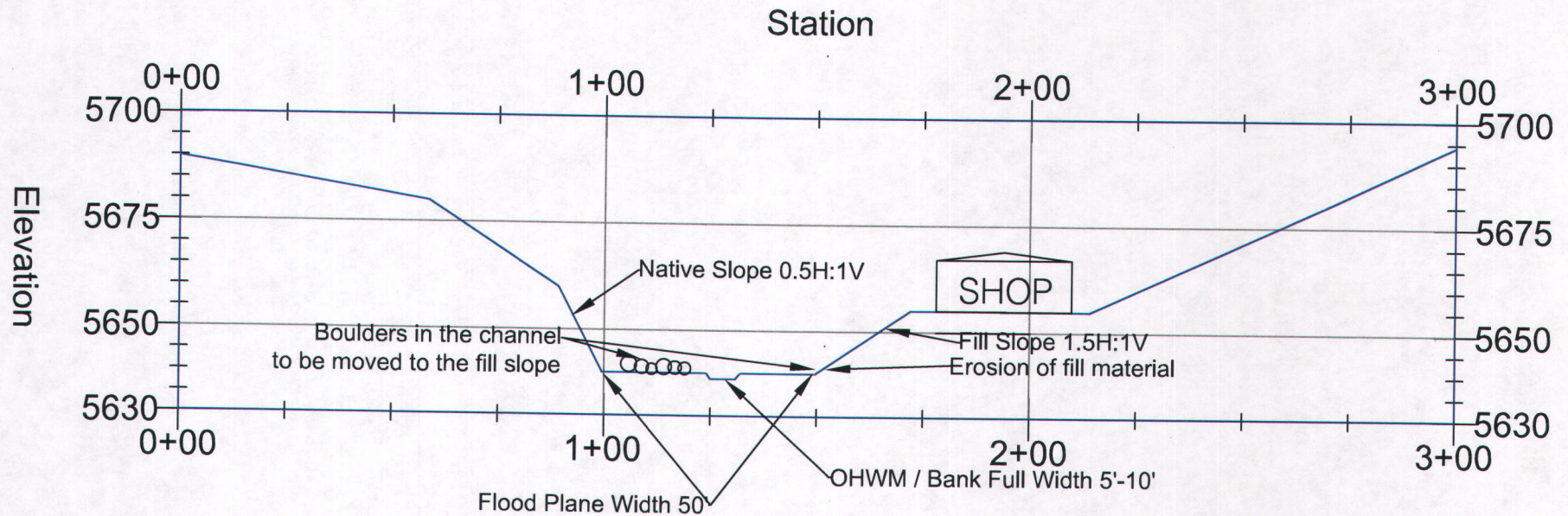
Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed  
Copyright:© 2014 Esri  
Coordinate System: NAD 1983 StatePlane Utah South FIPS



REVISIONS		Project:	
		County: San Juan	DANEROS MINE
Date:	By:	Location: T37S R16E	State: Utah
		MAP 1	
		PROJECT LOCATION MAP	
		Author: areither	Date: 10/26/2015
			Drafted By: areither

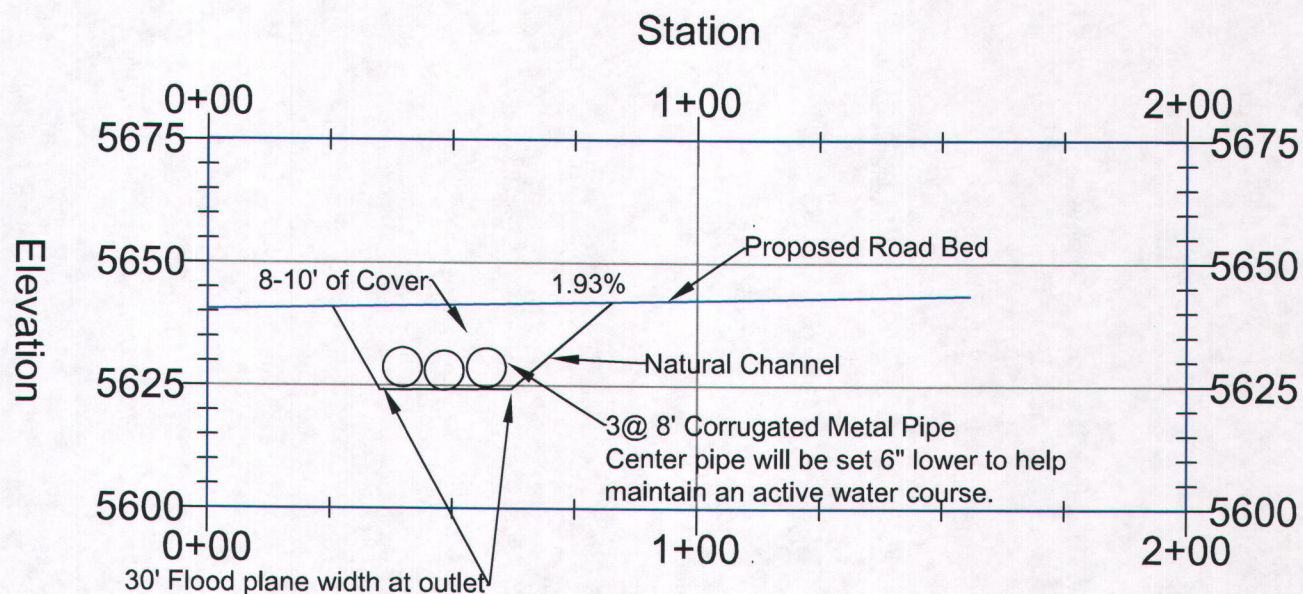


# Bullseye Canyon Cross Section A-A'



<b>EF</b> Energy Fuels Resources (USA) Inc.		Project: Daneros Mine	
		County: San Juan	State: Utah
		Location: T37S R16E	
		Map 3 Cross Section A-A'	
Author: RE	Date: 12/22/15	Drafted By: RE	

# Bullseye Canyon Cross Section B B'



		Project: Daneros Mine	
		County: San Juan	State: Utah
REVISIONS Date By		Location: T37S R16E	
		Map 4 Cross Section B-B'	
Author: RE		Date: 12/22/15	Drafted By: RE